

METHODS AND DEVICES FOR THE CONVERSION OF HEAT INTO POWER WITH HEAT RECYCLING

Publication number: WO2004029420

Publication date: 2004-04-08

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Classification:

- international: **F01K25/06; F01K25/10; F01K25/00;** (IPC1-7):
F01K25/10; F01K23/04; F01K25/06

- european: F01K25/06B; F01K25/10B

Application number: WO2003DE03045 20030913

Priority number(s): DE20021044385 20020924

Also published as:



DE10244385 (A1)

AU2003271532 (A1)

Cited documents:



DE10033604

WO9924766

EP0122017

BE883359

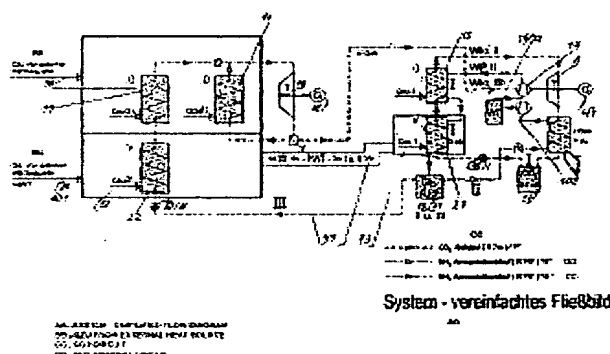
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Abstract of WO2004029420

Heat conversion into power: external heat supply from outside, internal heat injection, cooling heat exploitation from heat power circuits, recycling by means of heat pump working cycles, using water density as heat carrier in heat store, heat exchanger. Working medium controlled by means of pulse generator, central programme and circuits. In the heat power circuit with circulating CO₂, condensate at 253K/-20 DEG C/20 bar is pumped into the heat-accepting partial circuit at 75 bar, heat injected at 304K/31 DEG C to give pressurised gas, heat subsequently transferred at ca. 300 DEG C, for overheating expansion, from the heat pump circuit, the CO₂ pressurised gas applied in stages with heat injection to the engine drive, the gas pressure reduced to 20 bar ca. 0 DEG C, controlled by overheating conditions ". CO₂ heat of condensation of 280 kJ/kg is transmitted to heat pump working medium evaporation. NH₃ condensate gives vapour at ca. 1220 kJ/kg 1,2 bar 243 K/-30'C, subsequently the vapour compressed to ca. 20 bar with temperature rise (NH₃ property) at ca. 573 K/ca. 300 DEG C by means of pistons (without lubricant) pressurised by water pressure. Heat output from the heat power circuit with circulating NH₃ occurs partly by direct transmission of NH₃ into the heat pump working cycle. Working cycle: heat power circuit with circulating NH₃, approximately corresponds to the heat generation for heat pumps and generator drive with circulating CO₂.



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